

This listing of claims will replace all prior versions of claims in the application.

Claim 1. (previously presented) A coated substrate comprising:

a) an organic underlayer composition coating layer on a substrate, the underlayer composition comprising (i) a first resin that comprises optionally substituted phenyl groups, optionally substituted naphthyl groups, optionally substituted adamantyl groups, optionally substituted norbornyl groups, or optionally substituted isobornyl groups aromatic and/or alicyclic groups and (ii) a second resin that is distinct from the first resin and comprises one or more chromophore groups;

b) over the underlayer composition coating layer, a photoresist composition coating layer for imaging at less than 200 nm, the photoresist comprising a photoactive component and an Si-containing component.

Claim 2. (original) The coated substrate of claim 1 wherein the underlayer composition comprises an integral component that comprises both i) aromatic and/or alicyclic groups and ii) chromophore groups.

Claim 3. (cancelled)

Claim 4. (previously presented) The coated substrate of claim 1 wherein the chromophore groups comprise anthracene groups.

Claim 5. (currently amended) The coated substrate of claim 1 wherein the first resin comprises optionally substituted phenyl groups, optionally substituted naphthyl groups, optionally substituted adamantyl groups, optionally substituted norbornyl groups; or optionally substituted isobornyl groups.

Claims 6-21. (cancelled)

Claim 22. (currently amended) A method for forming a photoresist relief image comprising:

- a) applying an organic underlayer composition coating layer on a substrate, the underlayer composition comprising (i) a first resin that comprises optionally substituted phenyl groups, optionally substituted naphthyl groups, optionally substituted adamantyl groups, optionally substituted norbornyl groups, or optionally substituted isobornyl groups aromatic and/or alicyclic groups and (ii) a second resin that is distinct from the first resin and comprises one or more chromophore groups;
- b) applying a photoresist composition coating layer over the underlayer composition, the photoresist composition comprising a photoactive component and an Si-containing component;
- c) exposing the photoresist composition coating layer to radiation having a wavelength of less than about 200 nm.

Claim 23. (original) The method of claim 22 wherein the photoresist layer is exposed to radiation having a wavelength of less than 170 nm.

Claim 24. (original) The method of claim 22 wherein the photoresist layer is exposed to radiation having a wavelength of about 193 nm.

Claims 25-51. (cancelled)

Claim 52. (currently amended) An article of manufacture comprising a substrate having coated thereon a multilayer photoresist system, the system comprising:

- a) an organic underlayer composition coating layer on a substrate, the underlayer composition comprising (i) a first resin that comprises optionally substituted phenyl groups, optionally substituted naphthyl groups, optionally substituted adamantyl groups, optionally

substituted norbornyl groups, or optionally substituted isobornyl groups aromatic and/or alicyclic groups and (ii) a second resin that is distinct from the first resin and comprises one or more chromophore groups;

b) over the underlayer composition coating layer, a photoresist composition coating layer for short wavelength imaging, the photoresist comprising a photoactive component and an Si-containing component.

Claims 53-61. (cancelled)

Claim 62. (previously presented) The coated substrate of claim 1 wherein the underlayer composition comprises a thermal acid generator compound.

Claim 63. (previously presented) The coated substrate of claim 1 wherein the photoresist composition comprises a resin with Si groups.

Claim 64. (previously presented) The coated substrate of claim 1 wherein the photoresist composition resin comprises alicyclic groups.

Claim 65. (previously presented) The coated substrate of claim 1 wherein the photoresist composition resin comprises photoacid-labile groups.

Claim 66. (previously presented) The method of claim 22 wherein the underlayer composition comprises a thermal acid generator compound.

Claim 67. (previously presented) The method of claim 22 wherein the underlayer composition is crosslinked.

Claim 68. (previously presented) The method of claim 22 wherein the photoresist composition comprises a resin with Si groups.

Claim 69. (previously presented) The method of claim 22 wherein the photoresist composition resin comprises alicyclic groups.

Claim 70. (previously presented) The method of claim 22 wherein the photoresist composition resin comprises photoacid-labile groups.

Claim 71. (currently amended) A method for forming a photoresist relief image comprising:

a) applying an organic underlayer composition coating layer on a substrate, the underlayer composition comprising (i) a first resin that comprises optionally substituted phenyl groups, optionally substituted naphthyl groups, optionally substituted adamantyl groups, optionally substituted norbornyl groups, or optionally substituted isobornyl groups aromatic and/or alicyclic groups and (ii) a second resin that is distinct from the first resin and comprises one or more chromophore groups;

b) applying a photoresist composition coating layer over the underlayer composition, the photoresist composition comprising a photoactive component and an Si-containing component;

c) exposing the photoresist composition coating layer to radiation having a wavelength of less than about 170 nm.

Claim 72. (new) The substrate of claim 1 wherein the first resin comprises optionally substituted phenyl groups.

Claim 73. (new) The substrate of claim 1 wherein the first resin comprises optionally substituted naphthyl groups.

Claim 74. (new) The substrate of claim 1 wherein the first resin comprises optionally substituted adamantyl groups, optionally substituted norbornyl groups, or optionally substituted isobornyl groups.